REMARKS

STATUS OF THE CLAIMS

Claims 1, 4, 7 and 13 were previously presented.

Claim 5, 6, 9-11 are original claims.

Claims 12 was withdrawn.

Claims 2, 3 and 8 had been canceled.

RESPONSE TO INFORMATION PRESENTED WITHOUT IDS

In the Advisory Action the Examiner objected to the Ullmann's Encyclopedia of Industrial Chemistry information (pages 408, 409 and 418) that was attached to the amendment in response to the final office action and would not consider the information presented on these pages. According to the Examiner the information should have been submitted with an IDS. Attached hereto is a Supplemental IDS along with the appropriate fee wherein all of the pages of Ullmann's Encyclopedia that were discussed in the amendment in response to the final office action are attached. The Examiner is requested to consider the appropriate pages of Ullmann's Encyclopedia.

'112 REJECTIONS IN THE FINAL OFFICE ACTION

In the Advisory Action, the Examiner entered the amendment to claim 1 and new claim 13 and the '112 rejections in the final office action were withdrawn.

RESPONSE TO OBVIOUSNESS REJECTION UNDER 35 U.S.C. § 103(A)--JP '723 (JP 11-162723) IN VIEW OF EUROPE 059 (EP 717059) AND OPTIONALLY YOUNG (US 5,550,462) OF CLAIMS 1, 4-7 & 9-11 IN THE FINAL OFFICE ACTION

In the advisory action, the obviousness rejection of the final office action was not withdrawn. In the final office action, the Examiner asserted that Claims 1, 4-7, and 9-11 were considered obvious under 35 U.S.C. § 103(a) in view of JP 11-162723 (*hereinafter* "JP 723"), and EP Patent Application EP 0717,059 (*hereinafter* "EP 059"), and optionally, U.S. Patent No. 5,550,462 to Young, *et al.* (*hereinafter* "Young").

JP 723 was held to be directed to manufacturing a core for a motor or transformer and disclosed an aqueous compositions comprising 100 parts epoxy resin based on bisphenol-A-type, 1-40 parts hardening agent comprising latent curing agents, such as, dicyandiamide and phenol resin, water, and additives such as silica, pigments, "membrane formation assistant" and "dispersibility improver" and drying the coated steel sheets at elevated temperatures and applying heat and pressure thereby laminating/bonding the sheets together.

The JP 723 epoxy resin was held to read on part A of Claim 1, the dicyandiamide reads on part B of Claim 1, the phenol resin reads on part C of Claim 1, and the water reads on part E of Claim 1. As to part D of Claim 1, the Examiner stated that EP 059 suggests using a solvent. As to 50-200 parts of water set forth in Claim 1, it would have obvious to determine that amount of water without undue experimentation in view of the teachings of JP 723. The Examiner further stated that the use of "consists" fails to exclude the use of a phenol resin as an additional curing agent because the term "additives" in claim 1 is sufficiently broad to read on phenol resin.

APPLICANTS' RESPONSE TO EXAMINER'S COMMENTS

The Examiner does not disagree that JP 723 requires the addition of a phenol resin as a curing agent for the epoxy coating composition used in the JP 723 process as set forth in par. [0014-0016] of the machine translation. Applicants do not use a phenol resin in the coating composition used in the claimed process nor does the term "additive" include phenol resin. The claims describing the aqueous coating composition used Applicants' process use the term "consists of" which clearly excludes the presence of a phenol resin as required by JP 723. The Examiner has incorrectly taken the position that the term "additive" used in Applicants' claims is sufficiently broad to cover phenol resins and has cited the following unrelated references to support his theory. Gunasekaran et al. U.S. 6,548,189 directed to epoxy adhesives was cited which states that an additive can be a curing agent among other things such as, bonding enhancers, hardeners, flexiblilizers and tackifiers. Yamaji et al. U.S. 6,569,513 directed to a prepreg and process for manufacturing the same states that additives can be curing agents,

curing catalysts, filler, surfactant silane coupling agent and the like. JP 02124927 directed to a molding composition was cited and states that additives can be a crosslinking agent, a curing agent, a curing accelerator, a filler, a release agent, a coloring material and a coupling agent and goes further to state the phenol resin is a crosslinking agent which apparently contradicts the Examiner's position that phenol is other than a crosslinking agent. Lastly, JP 54097699 directed to accelerate the curing of an epoxy resin to improve thermal aging was cited which is truly unrelated since it teaches the addition of a reaction product of a phenol and a polyisocyanate to an epoxy resin.

The specification page 4, lines 22-26, clearly points out what Applicants consider to be additives and a phenol resin is not included. The term "additive" does not include phenol resins as alleged by the Examiner. In the advisory action, the Examiner pointed to page 4, line 22 of the specification wherein "additives as Component C" were described as "such as for example" and requested an explanation of that term. Applicants have merely listed several but not all of the additives that can be used in their process. This does not mean the term is expanded to include phenol resins as alleged. The term is clearly supported by the definition of "additives" in Ullmann's Encyclopedia of Industrial Chemistry which is well know and well accepted in the coatings industry. Vol 18, pages 408, 409, 418 and 465-472 are attached in the Supplemental IDS (*hereinafter* referred to a "Ullmann").

Applicants have highlighted relevant sections on Page 465 and quote from the same page as follows:

> **5. Paint Additives**
> In ***addition*** to ***resins***, solvents, and pigments, paints also contain ***additives***. The additive content is typically between ***0.01 and 1%***. Paint additives are used to prevent defects in the coating (e.g., foam bubbles, poor leveling, flocculation, sedimentation) or to impart specific properties to the paint (e.g., better slip, flame retardance, UV stability) that are otherwise difficult to achieve.
>
> ... ...
>
> Additives may be classified in the following groups:
> 1) Defoamers
> 2) Wetting and dispersing additives
> 3) Surface additives
> 4) Rheology additives
> 5) Driers and catalysts

6) Preservatives
7) Light stabilizers
8) Corrosion inhibitors

According to Ullmann, additives are added **in addition** to resins to create compositions. In other words, additives are **NOT** resins. Phenol resin is a resin. Therefore, phenol resin is NOT an "additive," as interpreted by the pertinent art.

The above references cited do not clearly point out what is meant by the term "additive" as it related to epoxy coating compositions. From the above cited collection of references, additives can be crosslinking agents which is clearly inaccurate to surfactant coupling agents. When faced with such a situation, one must look to an established scientific reference, in this case Ullmann.

In view of the confused inaccurate state of the art, it is not proper for the Examiner to put his interpretation on the term "additive" which is contrary to that of an established reference (Ullmann) and take the position that additive covers a phenol resin which it clearly does not.

Further, Ullmann, page 408, par. 2.10.2, discusses curing agents for epoxy resins and Table 2.6 lists phenolic resin as a curing agent for epoxy resins. Page 409, teaches that phenolic resins react with high molecular weight epoxy resins. Page 419 teaches the use of phenolic resins for coatings. Clearly, Ullmann teaches that phenolic resin are curing agents for epoxy resins and not additives as alleged by the Examiner.

In the advisory action, page 3, last paragraph, the Examiner states that in the claimed process, steel sheets are bonded with the composition which contains epoxy adhesive. The claims of Applicants' invention clearly state that a coating layer of an aqueous composition is applied to steel sheets NOT an epoxy adhesive as taught by the prior art and that this layer of coating composition is dried in step b) and thermally cured in step c). The references cited simply show the confused status of the art in regard to what constitutes and additive which is contrary to the clear disclosures of Ullman which are directed to coatings. Gunasekaran states the additives for adhesive are curing agents. Yamaji describes addtives as curing agents and curing catalysts. JP 927 describes additives as crosslinking agents, curing agents and curing accelerators and JP 699 describes additives as phenol resins. When faced with such a conflicting situation, one must refer to an

established scientific reference such as Ullman which clearly describes what additives are in coatings and as pointed out above the term does not include phenol resins as required by the references in particular JP 732.

Based on the above discussion, the rejection based on JP 732 can not stand and must be withdrawn. Applicants' have defined the components of the aqueous composition used in the process by the term "consists of" which signifies a closed system of components used for the aqueous composition which clearly excludes phenolic resins that are required by JP 732 and are not included in the term "additive" as set forth in the claims. EP 059 only discloses that solvents can be used in epoxy resin coatings but is not directed to Applicants' process for the production of electrical steel sheet core for use in electrical equipment. Young shows stable epoxy resin dispersions that contain micronized dicyamide but again not directed to Applicants' claimed process.

In regard to the rejection of Claims 4-7 and 9-11 which are dependent on Claim 1 and recite even further limitations to Claim 1, Applicants rely upon the arguments presented above to rebut the Examiner's rejection that these claims are obvious and therefore, unpatentable over JP 723 in view of EP 059 and optionally, in view of Young.

Applicants respectfully submit that NOT all elements of Claim 1 are disclosed by the combined references JP 723, EP 059 and Young. Therefore, Claim 1 and by extension, its dependent claims are patentable and not obvious under 35 U.S.C. § 103(a).

RESPONSE TO REJECTION UNDER 35 U.S.C. § 103(A) OF CLAIM 13 IN THE ADVISORY ACTION

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 723 in view of EP 059 and optionally, in view of Young and further in view of Stark (U.S. Patent No. 4,307,212) or Kohn, *et al.* (U.S. Patent No. 2,962,410).

Claim 13 is directed to the process as set forth in Claim 1 wherein the aqueous compositions 1 and 2 each contain ortho-titanic or –zirconic acid esters. Applicants rely upon the arguments presented above to rebut the Examiner's

assertion Claim 13 is unpatentable over the above-cited references. Further, neither Stark nor Kohn are directed to Applicants' claimed process for the production of electrical steel sheet cores for use in electrical equipment but merely show curable epoxy resin compositions. There is no disclosure or suggestion in either Stark or Kohn that these esters can be used in Applicants' claimed process.

CONCLUSION

In view of the above remarks, Applicants respectfully submit that stated grounds of rejection have been properly traversed, accommodated, or rendered moot and that a complete response has been made to the Final Office Action mailed on December 13, 2007 and the Advisory Action mailed April 7, 2008. Therefore, Applicants believe that the Application stands in condition for allowance with withdrawal of all grounds of rejection. A Notice of Allowance is respectfully solicited.

If the Examiner has questions regarding the Application or the contents of this Response, the Examiner is invited to contact the undersigned at the number provided.

RESPECTFULLY SUBMITTED,

DATED: April 14, 2008

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